

TECHNICAL ADVISORY GROUP ISSUE SUMMARY

BASELINE DETERMINATION

Background

Baseline emissions refer to the annual mercury emissions from a major utility or major stationary source and can be calculated using different methodologies. All of the different methodologies have individual advantages and disadvantages. The determination of baseline is important because it affects whether a source will be regulated by the proposed rules, the level of regulation that is applicable, and the base level for calculating required reductions and determining compliance with the proposed rules.

Key Points

- **Proposed Rule Methodology** – The methodology in the proposed rules for establishing baseline emissions relies on historical fuel usage for 1998, 1999, and 2000. This methodology may not be the most equitable and reliable approach for affected sources. Issues raised include the availability and precision of data on past fuel usage, and lack of accounting for any coal, physical process, or pollution control changes since 1998. There is a provision in the proposed rule that allows an alternative baseline to be set if the presumptive baseline is shown to be non-representative of normal operations.
- **Current Emissions Methodology Alternative** – An alternative baseline methodology would be to determine mercury emissions based on current year (beginning at the time of rule implementation) testing of the mercury content of the fuel and measuring the amount of mercury in the exhaust gas (stack testing) thereby developing an emission factor for each unit. This alternative should provide a better real-time estimate of the mercury loading to the environment and provide for variations in actual mercury content of the coal used.
- **Real Time Baseline Alternative** – An alternative is to not use a proposed baseline to measure reductions but instead use a real-time percent reduction from the fuel input or an emission rate approach. Eliminating a mass based approach does not directly control total emissions. The mass baseline also provides the basis for mass credit trading, averaging, and offsets.
- **Determination Period** – The overlap between final baseline determination with department approval and the time for engineering and ordering control equipment to meet reduction requirements may be a problem. The overlap creates uncertainty in making control decisions.
- **Sampling** - The small quantities of mercury in the fuel and combustion products makes sampling and content calculations difficult and can result in inaccuracies. The inaccuracies could lead to problems with establishing the baseline and ultimately determining a source's compliance with the proposed rule. The potential variability in sampling coal is being evaluated to determine the potential impact on baseline determination methods.
- **Data Records** – Sources which do not have reliable data records have no basis for evaluating whether proposing an alternative baseline under 446.03(d) is appropriate and there are no guidelines in the proposed rule on how the department will evaluate proposed alternatives. The variability between historic coal mercury content databases and that from current sampling is being evaluated to determine if reliable data records are available.

- **Baseline Adjustments** – The proposed rule does not include provisions for baseline adjustments for mercury emission reductions made before the baseline period is established, or provide credit for reductions made after the baseline period but before the effective date of the proposed rule.